

Abstract

Cytotoxic cyplasin of the sea hare, Aplysia punctata, cDNA cloning and expression of bioreactive recombinants

Described is a nucleic acid coding for a protein called "cyplasin" that shows a preferential toxicity to autonomously growing mammalian cells. Cell death induced by this protein differs from both apoptosis and necrosis. An intracellular cell death which occurs when recombinantly preparing cyplasin in cell cultures can be avoided by removal of the secretion signal in the cyplasin sequence. This modification makes it possible to express the cyplasin in a mammalian cell culture which is preferable with regard to the glycosylation pattern of the obtained protein. Thus, the present invention also relates to a method of recombinantly producing a protein in eukaryotic cells, preferably mammalian cells, which is cytotoxic for said cells when applied externally.